WHAT IS CLAIMED IS:

1. A motor housing assembly adapted to contain a motor wherein the motor comprises a fan adapted to cool the motor by drawing air across it, the assembly comprising:

an air inlet port,

a shroud to contain the motor within the housing,

an air inlet passageway defining a path from the inlet port to the motor,

an air outlet port,

an air outlet passageway separated from the inlet passageway and defining a path from the motor to the outlet port, and

a cone mounted in the outlet passageway and adjacent the fan,

whereby air that is exhausted by the fan will flow in a laminar fashion around the cone and through the outlet passageway and outlet port.

2. A motor housing assembly as described in claim 1,wherein the cone has a frusco-conical shape comprising a circular base, a circular top and a side wall, further wherein the side wall of the cone has a vertical cross-section with a convex curve.

3. A motor housing assembly as described in claim 1, wherein the inlet port has a first cross-sectional area and the outlet port has a second cross-sectional area and the first and second cross-sectional areas are substantially equal.



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4. A motor housing assembly as described in claim 2, wherein the fan comprises a central hub portion having a circular face and the circular face has substantially the same cross-sectional area a the circular top of the cone.

5. A motor housing assembly as described in claim 2, wherein the diameter of the fan is larger than the diameter of the circular base of the cone.

6. A motor housing assembly adapted to hold a motor wherein the motor comprises a fan adapted to cool the motor by drawing air across it, the assembly comprising:

an air inlet port,

a shroud adapted to contain the motor within the housing,

an air inlet passageway defining a path from the inlet port to the motor,

an air outlet port,

an air outlet passageway separated from the inlet passageway and defining a path from the motor to the outlet port, and

a cone mounted in the outlet passageway and adjacent the fan,

wherein the cone has a bullet shape comprising a circular base and a side wall, further wherein the side wall of the cone has a vertical cross-section with a convex curve,

whereby air that is exhausted by the fan will flow in a laminar fashion around the cone and through the outlet passageway and outlet port.

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7. A motor housing assembly adapted to hold a motor wherein the motor comprises a fan adapted to cool the motor by drawing air across it, the assembly comprising:

an air outlet port, and

an air outlet passageway defining a path from the fan to the outlet port, wherein the outlet passageway comprises a plurality of turns totaling at least 270° of direction change.

8. A motor housing assembly as described in claim 7, wherein the outlet passageway further comprises walls padded with a sound-absorbing material.

9. A motor housing assembly as described in claim 1, wherein the outlet passageway comprises three different turns of at least ninety degrees each.

10. A motor housing assembly as described in claim 9, wherein the outlet passageway further comprises walls padded with a sound-absorbing material.

11. A motor housing assembly of claim 9, including a housing having the air outlet port and air inlet port and wherein the air outlet port and air inlet port have substantially the same cross-sectional area.

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12. A motor housing assembly of claim 7, including a housing having the air outlet port and air inlet port and wherein the air outlet port and air inlet port have substantially the same cross-sectional area.

13. A motor housing assembly as described in claim 6, wherein the outlet passageway comprises a plurality of turns totaling at least 270° of direction change.

14. A motor housing assembly as described in claim 1, wherein the outlet passageway comprises a plurality of turns totaling at least 270° of direction change.

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